

SEQUENCE LISTING

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SUN, Tung-Tien

<120> TRANSGENIC ANIMALS AS URINARY BIOREACTORS FOR THE
PRODUCTION OF POLYPEPTIDE IN THE URINE, RECOMBINANT DNA
CONSTRUCT FOR KIDNEY-SPECIFIC EXPRESSION, AND METHOD OF
USING SAME

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<141> 2000-06-26

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<151> 1998-11-13

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<213> GOAT UROMOULIN

<400> 31

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<211> 27

<212> DNA

<213> GOAT UROMOULIN

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<213> GOAT UROMOULIN

<400> 33

aataaagtgc cagggcaggg ggcctta

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<210> 34

<211> 27

<212> DNA

<213> GOAT UROMOULIN

<400> 34

cttgtgtggt tgagtgtggt cttgacc

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<210> 35

<211> 27

<212> DNA

<213> GOAT UROMOULIN

<400> 35

tgtgaaaggg gatgtctttg ggtacca

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<210> 36

<211> 27

<212> DNA

<213> GOAT UROMOULIN

<400> 36

acagcaatgt gcaacccaat ggaaggg

27

<210> 37

<211> 1630

<212> DNA

<213> GOAT UROMOULIN

<400> 37

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tcttatgggg gataaacggg caaaggatac aaacagttca gaaaagaata aatagtaagc 240
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cgtcacccga gcaactaggc agacagaagg agaaagccct caaagaggca atgctgtgga 540
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gaaagtcacc tacttgtaaa aggattaatt ctacctttct ggtttcaggt aaggctatct 1560
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tgaaggatgg 1630

<210> 38

<211> 644

<212> PRT

<213> RAT UROMODULIN

<400> 38

Met Gly Gln Leu Leu Ser Leu Thr Trp Leu Leu Leu Val Met Val Val

1

5

10

15

SECRET

Gly Phe Tyr Val Tyr Asn Leu Thr Glu Pro Pro Glu Cys Asn Leu Ala
 275 280 285
 Tyr Cys Thr Asp Pro Ser Ser Val Glu Gly Thr Cys Glu Glu Cys Gly
 290 295 300
 Val Asp Glu Asp Cys Val Ser Asp Asn Gly Arg Trp Arg Cys Gln Cys
 305 310 315 320
 Lys Gln Asp Phe Asn Val Thr Asp Val Ser Leu Leu Glu His Arg Leu
 325 330 335
 Glu Cys Glu Ala Asn Glu Ile Lys Ile Ser Leu Ser Lys Cys Gln Leu
 340 345 350
 Gln Ser Leu Gly Phe Met Lys Val Phe Met Tyr Leu Asn Asp Arg Gln
 355 360 365
 Cys Ser Gly Phe Ser Glu Arg Gly Glu Arg Asp Trp Met Ser Ile Val
 370 375 380
 Thr Pro Ala Arg Asp Gly Pro Cys Gly Thr Val Leu Arg Arg Asn Glu
 385 390 395 400
 Thr His Ala Thr Tyr Ser Asn Thr Leu Tyr Leu Ala Ser Glu Ile Ile
 405 410 415
 Ile Arg Asp Ile Asn Ile Arg Ile Asn Phe Glu Cys Ser Tyr Pro Leu
 420 425 430
 Asp Met Lys Val Ser Leu Lys Thr Ser Leu Gln Pro Met Val Ser Ala
 435 440 445
 Leu Asn Ile Ser Leu Gly Gly Thr Gly Lys Phe Thr Val Gln Met Ala
 450 455 460
 Leu Phe Gln Asn Pro Thr Tyr Thr Gln Pro Tyr Gln Gly Pro Ser Val
 465 470 475 480
 Met Leu Ser Thr Glu Ala Phe Leu Tyr Val Gly Thr Met Leu Asp Gly
 485 490 495
 Gly Asp Leu Ser Arg Phe Val Leu Leu Met Thr Asn Cys Tyr Ala Thr
 500 505 510
 Pro Ser Ser Asn Ser Thr Asp Pro Val Lys Tyr Phe Ile Ile Gln Asp
 515 520 525

Phe	Arg	Leu	Thr	Pro	Gly	Leu	Gly	Cys	Thr	Asp	Val	Asp	Glu	Cys	Ser	
			100					105					110			
Glu	Gln	Gly	Leu	Ser	Asn	Cys	His	Ala	Leu	Ala	Thr	Cys	Val	Asn	Thr	
		115					120					125				
Glu	Gly	Asp	Tyr	Leu	Cys	Val	Cys	Pro	Lys	Gly	Phe	Thr	Gly	Asp	Gly	
		130				135					140					
Trp	Tyr	Cys	Glu	Cys	Ser	Pro	Ser	Ser	Cys	Glu	Pro	Gly	Leu	Asp	Cys	
145					150					155					160	
Leu	Pro	Gln	Gly	Pro	Asp	Gly	Lys	Leu	Val	Cys	Gln	Asp	Pro	Cys	Asn	
			165					170						175		
Thr	Tyr	Glu	Thr	Leu	Thr	Glu	Tyr	Trp	Arg	Ser	Thr	Glu	Tyr	Gly	Val	
			180					185						190		
Gly	Tyr	Ser	Cys	Asp	Ala	Gly	Gln	His	Gly	Trp	Tyr	Arg	Phe	Thr	Gly	
		195					200					205				
Gln	Gly	Gly	Val	Arg	Met	Ala	Glu	Thr	Cys	Val	Pro	Val	Leu	Ala	Cys	
		210				215					220					
Asn	Thr	Ala	Ala	Pro	Met	Trp	Leu	Asn	Gly	Ser	His	Pro	Ser	Ser	Ser	
225					230					235					240	
Glu	Gly	Ile	Val	Ser	Arg	Thr	Ala	Cys	Ala	His	Trp	Ser	Asp	His	Cys	
				245				250						255		
Cys	Arg	Trp	Ser	Thr	Glu	Ile	Gln	Val	Lys	Ala	Cys	Pro	Gly	Gly	Phe	
			260				265						270			
Tyr	Ile	Tyr	Asn	Leu	Thr	Glu	Pro	Pro	Glu	Cys	Asn	Leu	Ala	Tyr	Cys	
		275				280						285				
Thr	Asp	Pro	Ser	Ser	Val	Glu	Gly	Thr	Cys	Glu	Glu	Cys	Arg	Val	Asp	
		290				295					300					
Glu	Asp	Cys	Ile	Ser	Asp	Asn	Gly	Arg	Trp	Arg	Cys	Gln	Cys	Lys	Gln	
305					310				315						320	
Asp	Ser	Asn	Ile	Thr	Asp	Val	Ser	Gln	Leu	Glu	Tyr	Arg	Leu	Glu	Cys	
			325					330					335			
Gly	Ala	Asn	Asp	Ile	Lys	Met	Ser	Leu	Arg	Lys	Cys	Gln	Leu	Gln	Ser	
		340						345					350			

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1 5 10 15

Ala Thr Cys Thr Val Asp Gly Ala Ala Thr Thr Cys Ala Cys Gly Thr
35 40 45

Ala Thr Lys Ser Cys Val Asn Thr Gly Ser Tyr Thr Cys Val Cys Gly
65 70 75 80

Thr Cys Asn Gly Gly Asn Tyr Ser Cys Val Cys Ala Gly Tyr Gly Asp
100 105 110

Asp Ala Val Cys Val Asp Cys Val His Arg Asp Tyr Trp Arg Ser Thr
130 135 140

Ala Gly Val Arg Thr Cys Val Val His Cys Asn Thr Ala Ala Met Trp
165 170 175

Trp Ser Gly Asp Cys Cys Trp Asp Ala Val Lys Ala Cys Ala Gly Gly
195 200 205

Val	Gly	Thr	Cys	Cys	Arg	Val	Asp	Asp	Cys	Lys	Ser	Asp	Asn	Gly	Trp
225					230					235					240

His Cys Cys Lys Asp Asn Val Thr Asp Ser Arg Arg Cys Gly Val Asp
 245 250 255
 Asp Lys Ser Ser Lys Cys Lys Ser Gly Lys Val Met Tyr His Asp Ser
 260 265 270
 Cys Ser Gly Thr Arg Gly Asp Arg Asp Trp Met Ser Val Val Thr Ala
 275 280 285
 Arg Asp Gly Cys Gly Thr Val Met Thr Arg Asn Thr His Ala Thr Tyr
 290 295 300
 Ser Asn Thr Tyr Ala Asp Arg Asp Asn Arg Asn Ala Cys Ser Tyr Asp
 305 310 315 320
 Met Lys Val Ser Lys Thr Ser Met Val Ser Ala Asn Ser Met Gly Gly
 325 330 335
 Thr Gly Thr Thr Val Arg Met Ala Ser Ala Tyr Thr Tyr Gly Ser Ser
 340 345 350
 Val Thr Ser Thr Ala Tyr Val Gly Thr Met Asp Gly Gly Asp Ser Arg
 355 360 365
 Val Met Thr Asn Cys Tyr Ala Thr Ser Ser Asn Ala Thr Asp Lys Tyr
 370 375 380
 Asp Arg Cys Arg Ala Ala Asp Ser Thr Val Asn Gly Ser Gly Arg Ser
 385 390 395 400
 Val Met Arg Ala Gly Asn Tyr Asp Val Tyr His Cys Val Tyr Cys Asp
 405 410 415
 Thr Val Asn Lys Cys Arg Thr Cys Thr Arg Arg Ser Gly Ser Asp Thr
 420 425 430
 Arg Val Asn Gly Thr Arg Lys Gly Gly Ala Ala Met Ser Arg Ala Ala
 435 440 445
 Ser Ser Gly Val Trp Ser Ala Thr Thr Met Ser
 450 455

<210> 42

<211> 34

<212> PRT

<213> RAT UROMODULIN

<400> 42

Gly Val Gln Ala Ser Val Ser Lys Ala Ala Ser Ser Asn Leu Gly Phe
1 5 10 15

Leu Ser Ile Trp Leu Leu Leu Phe Leu Ser Ala Thr Leu Thr Leu Met
20 25 30

Val His

<210> 43

<211> 34

<212> PRT

<213> MOUSE UROMODULIN

<400> 43

Gly Val Gln Ala Ser Val Ser Lys Ala Ala Ser Ser Asn Leu Arg Leu
1 5 10 15

Leu Ser Ile Trp Leu Leu Leu Phe Leu Ser Ala Thr Leu Ile Phe Met
20 25 30

Val Gln

<210> 44

<211> 33

<212> PRT

<213> HUMAN UROMODULIN

<400> 44

Gly Val Gln Ala Thr Val Ser Arg Ala Phe Ser Ser Leu Gly Leu Leu
1 5 10 15

Lys Val Trp Leu Pro Leu Leu Leu Ser Ala Thr Leu Thr Leu Thr Phe
20 25 30

Gln

<210> 45

<211> 34

<212> PRT

<213> BOVINE UROMODULIN

<400> 45

Gly Gly Gln Ala Ala Met Ser Arg Ala Ala Pro Ser Ser Leu Gly Leu
1 5 10 15

Leu Gln Val Trp Leu Pro Leu Leu Leu Ser Ala Thr Leu Thr Leu Met
20 25 30

Ser Pro

<210> 46

<211> 42

<212> PRT

<213> TORPEDO

<400> 46

Asn Gln Phe Leu Pro Lys Leu Leu Asn Ala Thr Ala Cys Asp Gly Glu
1 5 10 15

Leu Ser Ser Ser Gly Thr Ser Ser Ser Lys Gly Ile Ile Phe Tyr Val
20 25 30

Leu Phe Ser Ile Leu Tyr Leu Ile Phe Tyr
35 40

<210> 47

<211> 42

<212> PRT

<213> PLACENTA

<400> 47

Thr Ala Cys Asp Leu Ala Pro Pro Ala Gly Thr Thr Asp Ala Ala His
1 5 10 15

Pro Gly Arg Ser Val Val Pro Ala Leu Leu Pro Leu Leu Ala Gly Thr
20 25 30

Leu Leu Leu Leu Glu Thr Ala Thr Ala Pro
35 40

<210> 48

<211> 41

<212> PRT

<213> DECAY ACCELERATING FACTOR

<400> 48

His Glu Thr Thr Pro Asn Lys Gly Ser Gly Thr Thr Ser Gly Thr Thr
1 5 10 15

Arg Leu Leu Ser Gly His Thr Cys Phe Thr Leu Thr Gly Leu Leu Gly
20 25 30

Thr Leu Val Thr Met Gly Leu Leu Thr
35 40

<210> 49

<211> 35

<212> PRT

<213> T. BRUCEI

<400> 49

Glu Pro Glu Pro Glu Pro Glu Pro Glu Pro Glu Pro Gly Ala Ala Thr
1 5 10 15

Leu Lys Ser Val Ala Leu Pro Phe Ala Ile Ala Ala Ala Ala Leu Val
20 25 30

Ala Ala Phe
35

<210> 50

<211> 36

<212> PRT

<213> HAMSTER

<400> 50

Gln Lys Glu Ser Gln Ala Tyr Tyr Asp Gly Arg Arg Ser Ser Ala Val
1 5 10 15

Leu Phe Ser Ser Pro Pro Val Ile Leu Leu Ile Ser Phe Leu Ile Phe
20 25 30

Leu Met Val Gly
35

<210> 51

<211> 44

<212> PRT

<213> RAT

